AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRAC				1. Contract I		Page 1 Of 16
2. Amendment/Modification No.	3. Effective Date	4. Requisition/Pu	rchase Req			(If applicable)
P00002	2003APR04	SEE SCHEDULE				
6. Issued By	Code W56HZV	7. Administered B		han Item 6)		Code S2101A
TACOM		DCMA BALT	•	Ź		
AMSTA-AQ-ABGA		217 EAST RI				
KATHY LAMBERT (586)574-7634		SUITE 1800				
WARREN, MICHIGAN 48397-5000		BALTIMORE,	MD 21202-	5299		
HTTP://CONTRACTING.TACOM.ARMY.MIL						
EMAIL: LAMBERTK@TACOM.ARMY.MIL			SCD C	PAS NONE	ADD	РТ но0338
0.37	1 G11 G 1 G1 1					
8. Name And Address Of Contractor (No., Stre	eet, City, County, State and	1 Zip Code)		9A. Amendmei	nt Of Solicitatio	n No.
STS INTERNATIONAL, INC.						
215 UNION STREET				9B. Dated (See	Item 11)	
P. O. BOX 10				Dated (See	recin 11)	
BERKELEY SPRINGS, WV 25411			Х	10A. Modificat	tion Of Contrac	t/Order No.
			L^	20120 1/20 (41110)	01 00111110	0.01011101
				DAAE07-02-C-	L063	
TYPE BUSINESS: Other Small Business	Performing in U.S.			10B. Dated (Se	e Item 13)	
Code 1ELF0 Facility Code				2002SEP27		
11. T	THIS ITEM ONLY APPLI	ES TO AMENDME	ENTS OF SC	LICITATION	S	
The above numbered solicitation is amend	ded as set forth in item 14.	The hour and date	specified fo	r receipt of Off	fers	
is extended, is not extended.			•	•		
Offers must acknowledge receipt of this amo	endment prior to the hour	and date specified i	n the solicita	tion or as ame	nded by one of t	the following methods:
(a) By completing items 8 and 15, and return						
offer submitted; or (c) By separate letter or						
ACKNOWLEDGMENT TO BE RECEIVE	D AT THE PLACE DESIG	SNATED FOR THE	E RECEIPT	OF OFFERS I	PRIOR TO THE	E HOUR AND DATE
SPECIFIED MAY RESULT IN REJECTION						
change may be made by telegram or letter, p	provided each telegram or	letter makes referei	nce to the so	licitation and t	his amendment,	and is received prior to the
opening hour and date specified.	anirod)					
12. Accounting And Appropriation Data (If re- ACRN: AA NET INCREASE: \$632,027.69	quireu)					
	ITEM ONLY APPLIES T				DERS	
KIND MOD CODE: A	It Modifies The Contra					
A. This Change Order is Issued Pursua The Contract/Order No. In Item 10.		Reimb., 52.243-2		The Ch	anges Set Forth	In Item 14 Are Made In
B. The Above Numbered Contract/Orde	er Is Modified To Reflect	The Administrative	Changes (su	ch as changes i	n paying office,	appropriation data, etc.)
Set Forth In Item 14, Pursuant To T	•					
C. This Supplemental Agreement Is En	tered Into Pursuant To Au	thority Of:				
D. Other (Specify type of modification a	and authority)					
E. IMPORTANT: Contractor is not.	X is required to sign	n this document and	return		opies to the Issu	ing Office
14. Description Of Amendment/Modification (	<u> </u>				•	
14. Description Of Amendment/Mounication (	Organized by OCF section	neadings, including	Sonciation	contract subje	ct matter where	t leasible.)
SEE SECOND PAGE FOR DESCRIPTION						
Except as provided herein, all terms and condi	tions of the document refe	renced in item 9A or	r 10A, as he	retofore change	ed, remains unc	hanged and in full force
and effect.		1				
15A. Name And Title Of Signer (Type or print	<del>(</del> )			Of Contracting	Officer (Type o	r print)
		DEREK MC		Y.MIL (586)5	74-7197	
15B. Contractor/Offeror	15C. Date Signed		d States Of A		1111	16C. Date Signed
13D. CORR actor/Orieror	13C. Date Signed	10D. United	u States Of A	amei ica		Toc. Date Signed
		By		/SIGNED/		2003APR04
(Signature of person authorized to sign)	_		Signature of	Contracting C	Officer)	
NSN 7540-01-152-8070	<u> </u>	30-105-02	- · · · · · · · · · · · · · · · · · · ·			ORM 30 (REV. 10-83)

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Name of Offeror or Contractor: STS INTERNATIONAL, INC.

SECTION A - SUPPLEMENTAL INFORMATION

PURPOSE OF THIS MODIFICATION:

Revise Scope of Work I/A/W the Changes Clause to incorporate effort for Operation Iraqi Freedom

PREVIOUS CONTRACT/FUNDED AMOUNT:
AMOUNT OF THIS ACTION:
CURRENT CONTRACT/FUNDED AMOUNT:

\$1,033,748.87 632,027.69 \$1,665,776.56

- 1. This Modification P00002 is a bilateral action.
- 2. The purpose of this modification is to modify the contract to incorporate changes to the scope of work required to support Operation Iragi Freedom.
- 3. The contract is modified as follows:
- a. SECTION B CLINs 0003 and 0004 The Estimated Cost, Fixed Fee, Total Cost, Royalty Cost and Total Cost with Royalty have been revised to reflect negotiated changes

CLIN 0005 has been established to reflect the Estimated Cost, Fixed Fee, Total Cost, Royalty Cost and Total Cost with Royalty of effort associated with Operation Iraqi Freedom (115 APM2 V-BASS vests)

Paragraph B.1 and B.1.2 have been revised to include CLIN 0005 effort.

b. SECTION C - Paragraphs C.2.1, C.2.1.1, C.2.2.2, C.2.4, C.2.4.1, C.2.4.2, C.2.5, C.2.5.1, C.2.5.2, C.2.5.3, C.2.5.4, C.2.5.6, C.2.5.11, C.2.6, C.2.7, C.2.8, C.2.9.1, C.2.10, C.2.10.1, C.2.10.2, C.2.10.2.1 and C.3.1 have been revised to reflect changes in the scope of work.

Paragraphs C.2.5.1.1, C.2.5.1.2, C.2.8.1, C.2.8.2 and C.2.11 have been added to incorporate effort associated with the CLIN 0005 APM2 V-BASS vests.

- c. SECTION D Paragraph D.1 has been changed to reflect packaging and marking for the APM2 V-BASS vests on CLIN 0005.
- d. SECTION F Paragraphs F.1 F.1.3 have been revised to reflect modified periods of performance.

Paragraph F.1.4 has been added to incorporate the period of performance for CLIN 0005 effort.

e. SECTION H - Paragraph H.3 has been modified to reflect the correct quantity of V-BASS vests being delivered upon exercise of Option 2.

Paragraphs H.4 and H.4.1 are added to reflect the addition of GFP being provided to the contractor for performance of the effort.

- f. SECTION J, Exhibit A CDRL A003 has been modified to incorporate additional requirements for the delivery of the Status Report.
  - CDRL A008 (Health Hazard Assessment Report) has been added to the contract.

Exhibit B - DID DI-SAFT-80106B has been added to the contract.

- 4. As a result of this Modification P00002, the total amount and total funded amount of the contract is increased by \$632,027.69 from \$1,033,748.87 to \$1,665,776.56.
- 5. The contractor agrees that this is a complete and final equitable adjustment for Modification P00002, and the Contractor releases the Government from any liability under this contract for any further equitable adjustments attributable to the facts or circumstances giving rise to Modification P00002. All other terms and conditions of the contract remain unchanged in in full force and effect.

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Name of Offeror or Contractor: STS INTERNATIONAL, INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
0003	SERVICES LINE ITEM				
	SECURITY CLASS: Unclassified				
	Contractor shall furnish all the supplies and services to accomplish the tasks specified in Section C, Scope of Work for the Vehicle Body Armor Support System (V-BASS), Option One effort, First Article Test Support				
	Estimated Cost: \$18,601.60  Fixed Fee: \$1,674.14  Total Cost: \$20,275.74  Royalty Cost: \$1,216.54				
	Total Cost w/Royalty: \$21,492.28				
	(End of narrative B001)				
0004	SERVICES LINE ITEM				
	SECURITY CLASS: Unclassified				
	Contractor shall furnish all the supplies and services to accomplish the tasks specified in Section C, Scope of Work for the Vehicle Body Armor Support System (V-BASS). Option 2 effort, Low Rate Initial Production (LRIP) - 90 additional V-BASS vests (M993)  Estimated Cost: \$398,136.94 Fixed Fee: \$35,832.32				
Total Cost: Royalty Cost: Total Cost w/Royalty:					
	(End of narrative B001)				

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Name of Offeror or Contractor: STS INTERNATIONAL, INC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	SERVICES LINE ITEM				
	SECURITY CLASS: Unclassified				
	Contractor shall furnish all the supplies				
	and services to accomplish the tasks specified in Section C, Scope of Work for the Vehicle				
	Body Armor Support System (V-BASS), 115 each				
	APM2 V-BASS vests				
	Estimated Cost: \$547,020.68				
	Fixed Fee: \$ 49,231.86				
	Total Cost: \$596,252.54 Royalty Cost: \$35,775.15				
	Total Cost w/Royalty: \$632,027.69				
	(End of narrative B001)				
0005AA	SERVICES LINE ITEM				\$ 632,027.69
	NOUN: STS INT'L				
	PRON: E122C405EH PRON AMD: 03 ACRN: AA				
	AMS CD: 633005CA411				
	Inspection and Acceptance				
	INSPECTION: Destination ACCEPTANCE: Destination				
	Deliveries or Performance				
	DLVR SCH PERF COMPL				
	REL CD QUANTITY DATE				
	001 0 SEE SECTION F				
	\$ 632,027.69				

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Name of Offeror or Contractor: STS INTERNATIONAL, INC.

#### B.1 <u>ESTIMATED COST, FIXED FEE AND PAYMENT</u>

- B.1.1 The estimated cost to the Government for performance of work under the Contract is set forth in Section B. In consideration of performance of the work specified under CLINs 0001 and 0005, the Government will pay the Contractor the Estimated Cost amount shown opposite CLINs 0001 and 0005. The amount shown shall constitute the estimated cost for the purpose of the Contract Clause entitled Limitation of Costs, but neither the Government nor the Contractor guarantee the accuracy of said estimate.
- B.1.2 The Contractor will be paid the fixed fee stated in Section B opposite CLINs 0001 and 0005 for the performance of work under the Contract and in accordance with the terms of the Contract Clause entitled Fixed Fee, (March 1997), FAR 52.216-8. The fixed fee together with the reimbursement of cost shall constitute full and complete consideration for the Contractor's service in connection with the work required and performed under this Contract.
- B.1.3 Allowable costs shall be determined and payment thereof, shall be provided in accordance with the Contract Clause entitled Allowable Cost and Payment, FAR 52.216-7 (March 2000). The Contractor may submit public vouchers every two weeks for payment under this Contract.

#### B.2 <u>FUNDING</u>

B.2.1 The Government will provide sufficient funds under this Contract to cover the estimated cost and fixed fee for the basic effort. The Contractor shall so plan and execute the work required by this contract as to expend and/or commit funds compatible with the schedule. Whenever the Contractor has reason to believe that the funds allotted to this Contract are either insufficient or excessive for the performance of work required, the Government shall be so notified.

\*\*\* END OF NARRATIVE B 001 \*\*\*

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Name of Offeror or Contractor: STS INTERNATIONAL, INC.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

- C.1 INTRODUCTION. The contractor, as an independent contractor and not as an agent of the government, and within the schedule and constraints of the contract, shall provide the necessary effort in support of the Vehicle Body Armor Support System as required by this Scope of Work (SOW) to meet the Government's requirements.
- C.2. Vehicle Body Armor Support System (V-BASS)
- C.2.1. Vehicle Body Armor Support System (V-BASS). The V-BASS evaluation was initiated to examine an existing body armor support system design against user-identified threats, user weight considerations and integration capabilities into tactical wheeled vehicle systems (TWVS). The V-BASS shall undergo design integration and testing processes. The V-BASS integration prototypes shall then undergo ballistic and Form, Fit and Function (FFF) testing. Finally, demonstration and evaluation by users in field environments shall be done to evaluate the benefits, liabilities and costs the V-BASS approach may have for military users of TWVS. Concept Evaluation Tests (CET) shall be done augmenting existing TWVS protection for the M915 A2 and A3 Family of Vehicles (FOV) drivers and crew serving out of Ft. Eustis (APM2 protection level vests see paragraph C.2.11) and other CONUS points (M993 protection level vests see paragraph C.2.10.2). V-BASS shall not be viewed as a replacement to other armoring approaches such as add-on kits or fully armored tactical wheeled vehicles; rather, V-BASS is an innovative alternative augmenting protection of soldiers at a fraction of the weight of current armoring practices and at potentially reduced costs. For this program, V-BASS is intended to provide personal protection for drivers and passengers of M915 A2 & A3 FOVs. V-BASS is also expected to be used by operators of HMMWVs.
- C.2.1.1. Program Plan. The V-BASS program will be run in three phases. Phase one (CLIN 0001) will be design finalization, form fit and function (FFF) testing, and ballistic testing (M993 V-BASS only) and validation testing. Phase two consists of two separately priced options (CLIN 0003 and 0004), striving for an M993 defeat capability. The first option will be a type of First Article Test (FAT) (CLIN 0003) capability demonstration. The second option (CLIN 0004), will be a type of limited rate initial production (LRIP) capability demonstration plus User Community Evaluation (UCE). Phase Three (CLIN 0005) is operated in parallel with Phase one and two. Phase Three is to provide APM2 protection for tactical vehicle support soldiers (drivers and crew) of M915 A2 and A3 FOV in the field.
- C.2.2. V-BASS Programmatics, configuration meetings, reviews and reports. The contractor shall hold meetings and reviews as specified in this section. The contractor shall provide for all facilities required, including audio-visual equipment and administrative personnel.
- C.2.2.1. Start of Work (SOW) meeting. The contractor shall convene and organize a one-day SOW meeting at the contractor's facilities within 30 days after contract award IAW DI-ADMN-81250A (CDRL A005) and keep minutes (CDRL A006). The contractor shall prepare and provide a proposed agenda for government review NLT four working days before the SOW meeting to the COR. The intent of the SOW meeting is to have an interactive government and contractor review of the contractual requirements and have discussions to ensure a common understanding of program objectives and goals. The contractor shall prepare the invite for the organizations involved with this V-BASS demonstration to the SOW meeting: DCMA, TSMs, PMs, users and combat developer(s) representatives. The COR, contract specialist and ACO shall be given 14 days notice of the date, time and place of the SOW. The contractor shall judiciously take account of all provided input in selecting a final V-BASS configuration. The needs of the end user shall be given highest priority in selecting the final V-BASS design. The SOW meeting will also serve as the initial coordination meeting for Critical Design Reviews (CDRs).
- C.2.2.2. Critical Design Reviews (CDRs). The contractor shall hold at least five CDRs. The contractor shall have at least one CDR at each V-BASS design milestone. Recommended milestones are: 1. the initial CDR, 2. just after FFF testing and before V-BASS ballistic units start construction, 3. after V-BASS ballistic testing and before Phase two FAT evaluations begin, 4. after completion of First Article Test (FAT) and before delivery of any V-BASS units for User Community Evaluations and 5. before delivery of Concept Evaluation Test (CET) V-BASS units on 15 June 2003 at Ft. Eustis, VA. The UCE CDR date and location shall be priced with CLIN 0003. The CET CDR will be part of CLIN 0005. The purpose of the CDRs is to fine tune and finalize the V-BASS design, integration, demonstration, training and test plans and to review program execution. The contractor shall prepare an agenda for government review NLT one week before these meetings (CDR) IAW DI-ADMN-81250A (CDRL A005) and keep minutes (CDRL A006).
- C.2.3. Reviews, Reports and meeting minutes. The contractor shall submit written minutes of the above reviews and meetings in accordance with DI-ADMN-81250 (CDRL A006). The minutes shall include all government and contractor action items, agreements, problems and pertinent discussions, as well as copies of any presented material.
- C.2.3.1. Close out meeting. The contractor shall convene a close out meeting at the end of contract work. The closing meeting shall be at the contractor's facility. The contractor's final report shall be presented and the findings, benefits, liabilities and costs shall be reviewed at the closing meeting.
- C.2.3.2. Monthly progress reports. The contractor shall prepare monthly progress reports in contractor format at the end of each month for inclusion into the final report. Contractor shall use DI-MGMT-80277 (CDRL A007) as a guide. This report may be combined with the monthly funds status report into a single report.
- C.2.3.3. Monthly contractor funds status reports. The contractor shall prepare and deliver to the government monthly Contractor Funds Status reports in the contractor's format in accordance with DI-MGMT-80277 (CDRL A007).
- C.2.3.4. V-BASS Program Schedule. The contractor shall develop and keep current a schedule that identifies tasks, milestones and

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processes required to effectively execute this demonstration program. This schedule shall be included in each Monthly Status report, DI-MGMT-80277 (CDRL A007). The schedule must be consistent with the applicable deliveries identified herein.

- C.2.3.5. Final Status Report. The contractor's final status report shall include all data gathered by the contractor related to V-BASS during the various tests, copies of the training materials, a description of the final V-BASS design (to support future follow-on action) and a delineation of any modifications to the original V-BASS that were done (CDRL A003).
- C.2.4. Training, Manuals and product Support. Training, manuals and product support of varying levels shall be delivered with all V-BASS shipments, tailored to the type of V-BASS delivered. Training shall be of two types, vehicle installation and proper use. Manuals shall be of two types, user (C.2.4.2.) and technical (C.2.4.3.). Contract product support shall include needed hands on training and test support.
- C.2.4.1. Training for the installation of V-BASS into vehicles. The contractor shall develop and provide a training package for the installation of V-BASS IAW DI-TMSS-80527A (CRDL A001), including: descriptions of adaptors needed to properly and safely use V-BASS, the proper positioning of V-BASS within the vehicle and adjustments V-BASS is capable of to permit operation of either V-BASS or the vehicle. The contractor shall develop and provide a training package for the individual soldier use of V-BASS IAW DI-TMSS-80527A (CRDL A001), including: proper fit, proper V-BASS positioning with the vehicle and on the soldier, warnings and cautions for safe use.
- C.2.4.1.1. Program of instruction (POI). The contractor shall provide a (one) POI supporting the concept evaluation testing (CET) CLIN 0005 which shall include both the installation and user training packages of C.2.4.1 and additional information to train teachers in the installation and use of V-BASS. The POI shall be developed and two (2) copies will be provided, one draft with the initial test article and one final with the 114 to be field tested. The POI shall include data needed to instruct the trainer in the proper technique(s) for the use of V-BASS, including the limitations and restrictions of use. The POI shall contain descriptive videos (CD-ROM based - windows media player format) for user training and training refresher classes, the video and POI paperwork shall include: proper V-BASS installation into vehicles; proper access into and egress from V-BASS while installed in vehicles; and the proper arrangement of V-BASS on the wearer to provide maximum safety and comfort.
- C.2.4.2. User and Technical manual for all V-BASS provided. The contractor shall provide at least one V-BASS user manual, in contractor format, for every V-BASS unit delivered. The manuals shall address operation, use, precautions, warnings, labels, maintenance, cleaning, modification, disposal and trouble shooting of the V-BASS unit. The user manuals shall be written at the sixth grade reading level, in accordance with DI-TMSS-80527 (CDRL A002), fit on a single fold-over 8.5 x 11 inch laminated page in place of the -10 manual and stored in the front carrier. An additional technical manual to fully describe armor and carrier evaluation, maintenance, repair, disposal and plate replacement procedures shall be provided in place of the -20 and -30 series manuals for every five units provided.
- C.2.5. V-BASS requirements. Paragraphs C.2.5.2 through C.2.5.2.12 apply to all V-BASS units (non-ballistic, APM2, and M993).
- C.2.5.1. V-BASS (M993 and APM2) threat specifications (reference Attachment 001, NATO STANAG 4569). All ballistically capable V-BASS units shall be able to withstand at least three consecutive hits on the plates, without repair, from the threat projectiles. During ballistic impact, the back face armor deformation shall not exceed 44 mm as indicated using the NIJ 0101.04 testing protocol for all ballistically capable V-BASS units.
- C.2.5.1.1. The V-BASS M993 (Phases one and two, CLINs 0001, 0003 and 0004) protection. The contractor shall provide protection from 7.62 NATO AP as specified in NATO STANAG 4569: "Protection Levels for Logistic and Light Armoured Vehicle Occupants" at the KE threat level 3 Assault and Sniper Rifles for V-BASS M993. The VBASS M993 shall withstand a 3 shot multi-hit test of M993 rounds hitting at muzzle velocity with a separation distance of 5 inches (plus or minus 1/4"), with no hit closer than 3/4" (plus or minus 1/8") from an edge. At least two hits will be as close to an edge or formation of 'weakness' as possible.
- C.2.5.1.2. The V-BASS APM2 (CLIN 005) protection. The contractor shall provide protection at muzzle velocity, of NIJ 0101.04 type (level) IV (four), with a four (4) inch separation distance, 1 and 1/2" (plus or minus 1/4") from an edge hit location.
- C.2.5.2. The contractor shall ensure that the wearable portion of all V-BASS units is labeled with the ballistic capability (nonballistic, APM2, M993), size and chest diameter range, with each section of the vest clearly labeled as F-Front, B-Back, L-left side and R-right side (for example: V-BASS Carriers: F-001C, B-001C, L-001C, R-001C and V-BASS Plates: F-001P, B-001P, L-001P and R-001P). Each label shall also contain a serial number for tracking purposes. The contractor shall ensure V-BASS units that are not ballistic capable, are permanently and clearly marked - "Prototype unit. NO BALLISTIC PROTECTION PROVIDED, unless ballistic plates have been exchanged both on the V-BASS label and on the ballistic plates" (see  ${\tt C.2.5.4}$ ).
- C.2.5.3 Human factors. The V-BASS units for Phase one, the concept demonstration testing (CLIN 0001) and for Phase three (CLIN 0005), shall be all of one size, large, fitting 41 to 45 chest measurements. The V-BASS units provided for Phase two, the optional user evaluations, shall be provided in two sizes, small and large, in equal quantities of both.
- C.2.5.4 V-BASS Sizing. The sizes of all V-BASS units provided shall comply with the anthropomorphic outer garment data of MILHDBK-759 as a guide. The soldier chest sizes for design are listed as follows:
- a. Large shall at least fit 41 45 chest

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- b. Small shall at least fit 33 37 chest
- C.2.5.5. All V-BASS spine loading. The contractor shall provide all V-BASS so that when properly sized the wearer has a seated spine loading no more than the lightest existing fielded body armor systems (~15 pounds). It is desired that no more than 2 additional pounds be applied to the seated wearer's spine for a properly sized V-BASS. The remainder of the weight is to be transferred to the vehicle not through the V-BASS wearer.
- C.2.5.6. All V-BASS shall not infringe upon or restrict the vehicle operator or crewmen from performing their duties: operating the vehicle with or without a trailer; operating the digital systems within the vehicle or trailer; vehicle and trailer preparation; and vehicle and trailer maintenance and inspection. The contractor shall meet this requirement by designing V-BASS to be retained in the vehicle crew seat such that tilting or accidental rollover of the cab or the vehicle will not permit V-BASS to become a projectile.
- C.2.5.7. All V-BASS shall take less than 75 seconds to don, less than 20 seconds to remove, with two free hands, and less than 35 seconds to remove with only one free hand.
- C.2.5.8. All V-BASS shall not restrict or impede head movement or the wearing of headgear, specifically the standard Kevlar helmet or the crewman's helmet. It is desired that V-BASS integrate with the helmet protection so that no ballistic gaps occur between the helmet and V-BASS.
- C.2.5.9. All V-BASS shall not restrict or impede wearer's vision or hearing.
- C.2.5.10. All V-BASS shall be capable of receiving a drop from a height of four feet onto concrete without breakage or becoming unfit for use. It is desired that V-BASS withstand the fall from thirteen feet 4 meters to the concrete without becoming unfit for use.
- C.2.5.11. The goal of V-BASS is to not endanger or harm the wearer during vehicle crash or accident or impact any greater than the effects experienced without wearing V-BASS.
- C.2.5.12. All V-BASS shall be adaptable with no modifications to the vehicles, (non-permanent adaptors are acceptable see C.3.6) for use in the High Mobility Multi-Wheeled Vehicle (HMMWV) Family of Vehicles (FOV) and M915 FOV tactical wheeled vehicles. It is required that V-BASS shall be adaptable to these tactical vehicles without modification of the vehicles. Adaptors to existing bolts, seat belts, belt mounting points or seat mountings without permanent vehicle modification is permitted to install V-BASS units.
- C.2.6. Vehicle Adaptors. If non-permanent vehicle adaptors are needed to permit V-BASS to function as required, then the contractor shall install and configure the vehicle adaptors at the test ranges, TACOM and Army Test and Evaluation Command (ATEC), Yuma Proving Ground (YPG). Contractor installations shall be coordinated with the government to insure minimum impact to user operations and schedules. All hardware removed by the contractor from any vehicle to accommodate V-BASS installation, shall be packaged by the contractor for storage and stored by the contractor for future re-installation. The V-BASS units for the user community evaluation (UCE CLIN 0004) and CET APM2 (CLIN 0005) will be installed by the testing troops (with help from the contractor provided POI).
- C.2.7. Phase One (1), Concept Demonstration. The contractor shall provide twenty (20) non-ballistic prototype V-BASS units for Form, Fit and Function (FFF) testing. The non-ballistic prototype systems shall be in two deliveries; the first ten shall be delivered within 64 days after contract award and the second ten (10) shall be delivered within 110 days after contract award. Prototype systems shall be representative of the contractor's selected V-BASS solution. The Government will conduct Phase One (1) V-BASS Concept Demonstration tests -- FFF testing. The contractor's first delivery of 10 non-ballistic V-BASS units shall be delivered to TACOM TARDEC Survivability. The contractor's second delivery of 10 non-ballistic V-BASS units shall be delivered to ATEC, Yuma Proving Ground, Arizona.
- C.2.7.1. FFF-Testing done at TACOM Survivability, Warren, MI. At the beginning of FFF-testing, the contractor shall provide 5 man-days of on-site technical and training support to a mix of engineers and soldiers (MOS 88M) conducting the FFF-test, to ensure safety of personnel. The contractor shall provide hands-on installation training and user training, providing responses to questions, trouble shooting problems and make V-BASS adjustments. The FFF-test will be constructed to determine or measure:
- o Measurements and fit and access against M915 FOV and HMMWV FOV.
- o Overall weight measurement.
- o  $\ensuremath{\operatorname{Spine}}$  loading measurements on vehicles.
- o Vision impacts.
- o Hearing impacts.
- o Donning time.
- o Removal time, one hand and two hands.

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o Other protective gear analysis.

Within ten days of the completion of the TACOM FFF-testing the Government will provide a test report to the contractor.

Fourteen days after receipt of the Government test report, the contractor shall submit a V-BASS improvement plan (CDRL A003) to correct or improve the V-BASS design based on the report. The contractor shall implement or incorporate any V-BASS design improvements prior to the next V-BASS build.

- C.2.7.2. FFF-Testing done by ATEC, Yuma, AZ. At the beginning of FFF-testing, the contractor shall provide 5 man-days of onsite technical and training support to a mix of engineers and soldiers (MOS 88M) conducting the FFF-test, to ensure safety of personnel. The contractor shall provide hands-on installation training and user training, providing responses to questions, trouble shooting problems and making V-BASS adjustments. The ATEC FFF-test will not start until the Safety Assessment Report (SAR) (see paragraph C.2.8 below) is submitted and reviewed. The test will consist of the following:
- o Vehicle access analysis.
- o V-BASS weight analysis.
- o Driver operations analysis.
- o Crew operations analysis.
- o Passenger & trailer operations analysis.
- o Other protective gear analysis.
- o Hearing analysis.
- o Vision and visibility analysis.

Within one month after ATEC FFF-test completion, the Government will provide a test report to the contractor. Two weeks after receipt of ATEC FFF-test test report, the contractor shall submit an improvement plan (CDRL A003), addressing suggestions and deficiencies identified to improve V-BASS design. The contractor shall implement or incorporate any improvements needed prior to the build of the ballistic V-BASS units.

- C.2.8 Supporting documentation and data. The contractor shall provide documents to support all fielding tests and evaluations, including SAR (Safety Assessment Report), HHAR data only (Health Hazard Assessment Report DI-SAFT-80106B (CDRL A008) as well as documents to support the Government's limited safety release for testing.
- C.2.8.1 Safety Assessment Report (SAR). Within 76 days after contract award, the contractor shall prepare and submit a safety assessment report (SAR) in accordance with Data Item Description (DID) DI-SAFT-80102A (CDRL A004) and MIL-STD 882C, task 301 for the V-BASS design. The contractor shall update the SAR to reflect design changes and provide those changes to the addressees listed on CDRL A004.
- C.2.8.2 Health Hazard Analysis Report (HHAR) (CDRL A0008). Within 30 days after execution of Modification P00002, the contractor shall prepare and submit a HHAR document using DI-SAFT-80106A (CDRL A0008) and MIL-STD 882C, task 207. This HHAR shall support the efforts of the Government (CHPPM Center for Health Promotion Preventive Medicine) in doing their HHAR. The contractor shall provide, data to support the generation of a Government HHAR.
- C.2.9. Phase One (1) Testing of Ballistic V-BASS M993 (CLIN 0001). Within 310 days after contract award (01 Aug 03), the contractor shall provide 30 refined V-BASS units for ballistic validation testing for full verification of form, fit, and function, as well as, M993 ballistic design verification and to provide for safety analysis. The contractor shall update his SAR to reflect design changes. The contractor shall deliver fifteen (15) V-BASS M993 units to TACOM Survivability and fifteen (15) V-BASS M993 units to ATEC.
- C.2.9.1. V-BASS M993 validation testing done at TACOM Survivability, Warren, MI. At the beginning of validation testing, the contractor shall provide 10 man-days of on-site technical and training support to a mix of engineers and soldiers (MOS 88M) conducting the test, to ensure safety of personnel. The contractor shall provide hands-on installation training and user training, providing responses to question, trouble shooting problems and make all needed V-BASS adjustments. Validation testing will consist of:
- o FFF-test revalidations
- o Ballistic tests
- o Seat effects test

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- o V-BASS drop tests
- o Vehicle crash, impact & accident tests simulated and actual
- o Training and user manual evaluation.

Within twenty-one (21) days after test completion, the Government will provide the contractor the validation test report. The contractor shall, within two weeks after receipt of Government test reports, submit a V-BASS improvement plan (CDRL A003) to correct or improve identified needs for the V-BASS design. The contractor shall implement or incorporate V-BASS design improvements prior to the next V-BASS build.

- C.2.9.2. V-BASS M993 validation testing done by ATEC, Yuma, AZ. At the beginning of validation testing, the contractor shall provide 10 man-days of on-site technical and training support to a mix of engineers and soldiers (MOS 88M) conducting the test, to ensure safety of personnel. The contractor shall provide hands-on installation training and user training, providing responses to question, trouble shooting problems and make all needed V-BASS adjustments. Validation testing will consist of:
- o FFF-test revalidations
- o Crew seating analysis
- o Passenger seat analysis
- o Drivers seat analysis

Within twenty (21) days the Government will provide the ATEC validation test report to the contractor. The contractor shall, within two weeks after receipt of the ATEC validation test report, submit a V-BASS improvement plan addressing all non-conformances and comments noted by ATEC to ensure design corrections or improvements the V-BASS design based on the report. The contractor shall implement or incorporate V-BASS design improvements prior to the next V-BASS build.

- C.2.10. Phase Two (2) -- Option Testing. Phase two (2) will consist of two options. Option one (1) (CLIN 003) will be to support a FAT. Option two (2) (CLIN 004) will be to support User Community Evaluations. All Phase two V-BASS units shall meet requirements paragraphs C.2.5.1.1. and C.2.5.2 through C.2.5.12 for M993 defeat capability.
- C.2.10.1. Phase two, Option One (1), V-BASS M993 -- First Article Testing (FAT). The contractor shall provide two (2) V-BASS M993 units to serve as production representative first article test devices to TACOM TARDEC Survivability within twenty-one (21) days after option exercise. The first article testing will be done at TACOM Survivability, Warren, MI. The contractor may elect to be present at all FAT at their own expense.

The First Article Testing will at least consist of the following tests (see paragraph C.2.5):

- o All form, fit, and function tests.
- o Testing to ensure compliance with applicable V-BASS requirements
- o Vehicle crash, impact & accident test/analysis instrumented crash tests.
- o Ballistic tests.

Within thirty-one (31) days after receipt of FAT units, the Government will provide the contractor a FAT report. The contractor shall, within two weeks after receipt of FAT report, submit a V-BASS improvement plan (CDRL A003) to correct or improve identified needs for the V-BASS design. The contractor shall implement or incorporate V-BASS design improvements prior to the V-BASS build supporting User Community Evaluations.

- C.2.10.2. Phase two, Option two (2) V-BASS M993 -- User Community Evaluation (UCE) & LRIP Type Testing. Only upon successful completion of Option one (1) first article testing, the Government may exercise the option to have the contractor provide 90 M993 ballistically capable VBASS units in two sizes, Large and Small (half the quantity for each size). This LRIP Type Testing will also incorporate user community evaluation done in the field with coordination with TACOM Survivability and the User community. The contractor shall deliver the following V-BASS count breakout in the identified time frames. Contractor support at each site shall not exceed 10 man-days total. At the beginning of each user test, the contractor shall provide on-site technical and training support to a mix of engineers and soldiers (MOS 63B thru 88M) conducting the test, to ensure safety of personnel. The contractor shall provide hands-on installation training and user training, providing responses to question, trouble shooting problems and make all needed V-BASS adjustments.
- o User 1 1/3 of the V-BASS units thirty (30) days after Option Two exercise
- o User 2 1/3 of the V-BASS units forty-five (45) days after Option Two exercise

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o User 3 - 1/3 of the V-BASS units - sixty days (60) after Option Two exercise

User names and addresses will be provided to the contractor at Option Two (2) (CLIN 0004) exercise. For cost and pricing purposes of the Option 2, the three users will be assumed to be one (1) from the east US coast, one (1) from the mid-US and one from the west coast US. For purposes of estimating shipping costs only, these installations are identified as: Aberdeen Proving Ground, MD; Ft. Hood, TX; and Ft. Wainwright, AK, with 3-1/3 man-days of contractor provided on-site support at each facility.

- C.2.10.2.1. Phase two, Option Two (2) V-BASS M993 -- UCE Training. The contractor shall provide training packages (CDRL A001) for each of the three user communities receiving 30 each V-BASS units. The contractor shall provide one training package per every ten V-BASS units or part thereof. The training packages shall meet the requirements outlined in the User/Technical Manual section C.2.4 above.
- C.2.11. Phase Three (3) CET (CLIN 005). The contractor shall provide 115 V-BASS APM2 units conforming to all the requirements of C.2.5.1.2 and C.2.5.2 through C.2.5.12. The latest configuration providing for roll over considerations shall be provided. The ballistic capability shall be of proven technology meeting NIJ 0101.04 level 4, with a four (4) inch separation distance, 1" ( 1/8") from an edge hit location at muzzle velocity. The contractor shall deliver one (the first) V-BASS APM2 unit prior to 31 April 2003 to TACOM, Warren, MI for initial article ballistic validation and FFF testing. The contractor shall deliver prior to 15 June 2003, the remaining 114 V-BASS units to Ft. Eustis, S-4, 7th Trans Gp DCO, (Grp S4), Ft. Eustis, MD ph. (757) 878-5237 or any other CONUS location as directed by the Government (incremental shipments are authorized). Acceptance criteria of the 114 are based on: count; piece/part configuration in accordance with the Version 3 design, ballistic APM2 certification paperwork for each unit; user manual (one per unit); technical manual (one per five units); sewing and finishing per contractor provided specification (via CDRL A003, design Improvement plans for large V-BASS); armor plate and carrier fit (i.e. inspector will verify if the plates fit inside the carriers); and inclusion of required mounting adapters for M915 A2 and A3 FOVs for each V-BASS unit.
- $\hbox{C.2.12. Government Furnished Equipment and Information (GFE/GFI).}\\$
- C.2.12.1. Drawings and paper information as requested by the contractor for the HMMWV FOV and the M915 FOV will be the total substance of all GFE to the contractor. The Government will only provide information to the contractor after determining the information is necessary for the performance of this contract.
- C.2.12.2. The contractor will be permitted access to one representative of each vehicle from the HMMWV FOV and the M915 FOV at TACOM TARDEC Survivability, Warren, MI.
- C.2.12.3 The Government will provide anthropomorphic data needed to design the two V-BASS unit sizes (large and small), specifically, hip width, torso height, shoulder width, and desired curvature-radius (shape) for chest and back.
- C.2.12.1. Drawings and paper information as requested by the contractor for the HMMWV FOV and the M915 FOV will be the total substance of all GFE to the contractor. The Government will only provide information to the contractor after determining the information is necessary for the performance of this contract.
- C.2.12.2. The contractor will be permitted access to one representative of each vehicle from the HMMWV FOV and the M915 FOV at TACOM TARDEC Survivability. Warren, MI.
- C.2.12.3 The Government will provide anthropomorphic data needed to design the two V-BASS unit sizes (large and small), specifically, hip width, torso height, shoulder width, and desired curvature-radius (shape) for chest and back.
- C.3. Deliverables
- C.3.1. Documentation. The contractor shall prepare all deliverables in contractor format unless otherwise specified. The deliverables shall be furnished to the required Government offices in accordance with the quantity and schedule set forth in the Contract Data Requirements List (CDRL) (DD Form 1423). To facilitate transition to a paperless reporting system, the contractor shall submit reports in electronic format, whenever required, in an IBM or IBM compatible format. Required Government format is Windows Microsoft Office 98 applications (MS Word, Excel, Access, PowerPoint, etc.). The contractor shall prepare reports using best commercial practices that will produce documents that are clearly written, describe accomplishments accurately, detail technical issues, and define risks and problems and provide unambiguous, detailed solutions.

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SECTION D - PACKAGING AND MARKING

D.1 V-BASS Vests -The Vests shall be prepared for shipment from the contractor's facility using best commercial practices to minimize risk of damage to the vests during transportation to the test facilities/final shipment. Delivery of the vests to/from the test site(s) specified by the Government is the responsibility of the contractor. Any repairs required as a result of transportation to/from the test sites or during final delivery are the responsibility of the contractor. The ll4 units to be delivered to Ft. Eustis (reference paragraph C.2.11) shall be palletized and secured for open transport (shrink wrapped).

D.2 OTHER DATA ITEMS - Packaging and delivery of the required Data Item Deliverables will be accomplished using best commercial practices. The delivery of the item as specified by the Government is the responsibility of the Contractor. Replacement of any CDRL item as a result of transportation damage, or loss is the responsibility of the Contractor

\*\*\* END OF NARRATIVE D 001 \*\*\*

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SECTION F - DELIVERIES OR PERFORMANCE

#### F.1 PERIOD OF PERFORMANCE

- F.1.1 The total period of performance for CLIN 0001 shall be from the date of award of this contract through eleven (11) months after contract award.
- F.1.2 The total period of performance for Option One (CLIN 0003) shall be from the date of exercise of the option through completion of FAT 65 days after exercise of option.
- F.1.3 The total period of performance for Option Two (CLIN 0004) shall be from the date of exercise of the option through ten months and
- F.1.4 The total period of performance for Phase Three (CLIN 0005) shall be from the date of award of Modification P00002 through 15 June 2003.
- F.2 The Draft Final Status Report shall be submitted 30 days before end of contract. Government shall review and provide comments 15 days after receipt of Draft Final Status Report. Contractor shall incorporate Government comments and deliver the Final Status Report 15 days after receipt of comments.

\*\*\* END OF NARRATIVE F 001 \*\*\*

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SECTION G - CONTRACT ADMINISTRATION DATA

LINE PRON/ OBLG STAT/

ITEM AMS CD

0005AA E122C405EH

633005CA411

ACRN JOB ORD NO

AA 1 \$

22C405

PRIOR AMOUNT

PIIN/SIIN DAAE07-02-C-L063

0.00 \$

AMOUNT

INCREASE/DECREASE

632,027.69

632,027.69

AMOUNT

CUMULATIVE

NET CHANGE

\$

632,027.69

NET CHANGE SERVICE

NAME

Army

BY ACRN AA ACCOUNTING CLASSIFICATION

21 22040000026D7675P633005255Y S20113

ACCOUNTING STATION

INCREASE/DECREASE AMOUNT

W56HZV \$ 632,027.69

632,027.69 NET CHANGE \$

PRIOR AMOUNT

OF AWARD

INCREASE/DECREASE AMOUNT

CUMULATIVE OBLIG AMT

NET CHANGE FOR AWARD: \$

1,033,748.87

\$ 632,027.69

1,665,776.56

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SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 SPECIAL PROVISIONS

H.1.1 FAT Approval - Gov't Testing

(a) The Contractor shall deliver two (2) units(s) of Contract Line Item 0003 within 260 calendar days from the date of this contract or if the DESIRED DELIVERY SCHEDULE clause is in section F, as specified in the clause, or as otherwise proposed by the contractor and accepted by the Government, at the following address:

Commander

US ARMY TACOM TARDEC
AMSTA-TR-R / 263 (CLAUSON, MICHAEL, 586-574-7654)
WARREN, MI 48397-5000

for first article tests. The shipping documentation shall contain this contract number and the Lot/Number identification. The characteristics that the first article must meet are specified elsewhere in this contract.

- (b) Within 21 calendar days after the Government receives the first article, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.
- (c) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government related to these tests.
- (d) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the DEFAULT clause of this contract.
  - (e) Unless otherwise provided in the contract, the Contractor--
- (1) May not deliver the approved first article as a part of the contract quantity as they will have been consumed or destroyed in validation testing; and
  - (2) Shall remove and dispose of any first article from the Government test facility at the Contractor's expense.
- (f) If the Government does not act within the time specified in paragraph (b) or (c) above, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the CHANGES clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.
- (g) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.
- (h) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for (1) progress payments, or (2) termination settlements if the contract is terminated for the convenience of the Government.
- (i) The Government may not waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.
  - (j) The Contractor shall produce both the first article and the production quantity at the same facility.

[End of Clause]

- $\ensuremath{\text{\text{H.2}}}$  OPTION ONE First Article Test Support CLIN 0003
- H.2.1 The Government shall have the unilateral right to exercise an option for the effort described in Section C.2.10.1. The Government may exercise this option any time between six months and 12 months after contract award. If exercised, the option will be

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awarded on a cost-plus-fixed-fee basis as set forth in CLIN 0003.

H.3 OPTION TWO - Low Rate Initial Production (LRIP) Quantity of 90 V-BASS vests to support User Community Evaluations - CLIN 0004

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- H.3.1 The Government shall have the unilateral right to exercise an option for the effort described in Section C.2.10.2. The Government may exercise this option after approval of First Article Test (not later than 12 months after contract award). If exercised, the option will be awarded on a cost-plus-fixed-fee basis as set forth in CLIN 0004.
- H.4 Government Furnished Property
- H.4.1 The Government will provide the one M915 driver's seat as GFP (reference the Government Property (Cost-Reimbursement, Time-and-Material, or Labor Hour Contracts) clause (52.245-5) in Section I of the contract) for use in analysis of V-BASS. This equipment will be provided to the contractor not later than 11 Apr 03. The contractor must return the seat by 31 Aug 03 in the same condition it was received in.

\*\*\* END OF NARRATIVE H 001 \*\*\*